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MIL-STD-2045-17502-4
28 October 1993

MILITARY STANDARD

Information Technology
DoD Standardized Profiles AMH2n(D)
Message Handling Systems (MHS)
Military Messaging (P772)

Part 4: AMH23(D) MM Requirements for MTS Access (P3)

AMSC N/A AREA DCPS

Foreword

This military standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be of use in improving this MIL-STD should be addressed to the:

Joint Interoperability and Engineering Organization (JIEO)
ATTN: TBBD
Building 286
Fort Monmouth, New Jersey 07703-5613

by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this MIL-STD or by memorandum.

This DoD Standardized Profile (DSP) is a functional standard produced by the Data Communications Protocol Standards (DCPS) Technical Management Panel (DTMP) Working Group 2 on Upper Layers. DTMP functional standards are functional groupings of base standards. Referenced base standards may be commercial, DoD or de facto standards, although International Standards (produced by the International Standards Organization (ISO), the Consultative Committee for International Telephone & Telegraph (CCITT) (now known as Inter-Telecommunication Union (ITU)), and other bodies) are preferred when possible.

This document forms part of a multipart DSP for MHS covering Military Messaging requirements. It is outside the scope of the current Taxonomy Framework for International Standardized Profiles. It will correspond to the DoD extensions to that taxonomy which will be found in MIL-HDBK-829. This DSP is a content specific profile for the Military Messaging content type referred to as P772 as defined in the Allied Communication Publication (ACP) 123.

The document reflects decisions reflected in ACP 123 and preliminary discussions for associated decisions to be placed in the US Supplement to ACP 123.

For DoD acquisition purposes, where such differences exist, this DSP shall be the controlling document.

This part of MIL-STD 2045-17502 contains two normative annexes and one informative annex.

The Preparing Activity for this standard is the DTMP. The custodians for the document are identified in the Defense Standardization Program, "Standardization Directory (SD-1)" and are classified in the Federal Supply Classification (FSC) system under Data Communication Protocol Standards (DCPS). Additional information can be obtained from:

Joint Interoperability and Engineering Organization (JIEO)
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Introduction

This DoD Standardized Profile (DSP) is defined within the context of functional standardization, in accordance with the principles specified by ISO/IEC TR 10000, "Framework and Taxonomy of International Standardized Profiles" and MIL-HDBK-829. The context of functional standardization is one part of the overall field of Information Technology (IT) standardization activities - covering base standards, profiles, and registration mechanisms. A profile defines a combination of base standards that collectively perform a specific well-defined IT function. Profiles standardize the use of options and other variations in the base standards to promote system interoperability and to provide a basis for the development of uniform, internationally recognized system tests.

One of the most important roles for a DSP is to serve as the basis for the development of recognized tests. DSPs also guide implementors in developing systems that fit the needs of the US Department of Defense (DoD). DSPs are produced not simply to 'legitimize' a particular choice of base standards and options, but to promote real system interoperability. The development and widespread acceptance of tests based on this and other DSPs is crucial to the successful realization of this goal.

This part of MIL-STD 2045-17502 covers MM requirements for MTS Access (P3). It specifies any additional P3 support to that specified in AMH1n(D) and defines conformance requirements for an MTA which supports remote access for MM use, and for a remote MTS-user in an MM context (i.e., MM UA or MS), with respect to support of P3 and associated functionality (requiring conformance to AMH12(D) and by reference to the common MM specifications in part 1).

This part of MIL-STD 2045-17502 contains two normative annexes:

Annex A DSPICS Requirements List for MIL-STD 2045-17502-4 (AMH23(D))

Annex B Amendments and corrigenda

and one informative annex:

Annex C Specific DoD requirements

Information technology - Defense Standardized Profiles AMH2n(D) - Message Handling Systems - Military Messaging

Part 4 : AMH23(D) - MM Requirements for MTS Access (P3)

1 Scope

1.1 General

This part of MIL-STD 2045-17502 covers access to a Message Transfer System (MTS) in a Military Messaging (MM) environment using the P3 MTS Access Protocol (see also figure 1). These specifications form part of the Military Messaging application functions as defined in the parts of MIL-STD 2045-17502, and are based on the Common messaging content type-independent specifications in MIL-STD 2045-17501.

1.2 Position within the taxonomy

This part of MIL-STD 2045-17502 is the fourth part of a multipart MIL-STD for AMH2n(D) Military Message Handling Systems.

This part of MIL-STD 2045-17502 specifies the following profile:

AMH23(D) - MM Requirements for MTS Access (P3)

This DSP shall be combined with the multipart DSP identified as þAMH1, Message Handling Systems - Common DoD Messaging" (see also ISO/IEC TR 10000-1, 8.2 for the definition of multipart ISPs).

It may be combined with any DoD approved T-Profiles (see ISO/IEC TR 10000) specifying the OSI connection-mode Transport service.

1.3 Scenario

The model used is one of access to an MTS by an MM MTS-user - specifically, the interconnection between a message transfer agent (MTA) and an MTS-user using the P3 protocol, as shown in figure 1.

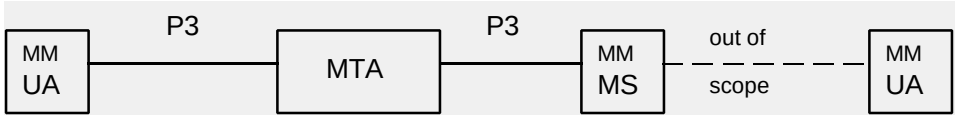

Figure 1 - AMH23(D) scenario

The AMH23(D) profile covers all aspects of the MTS Abstract Service, as defined in clause 8 of ISO/IEC 10021-4 when realized using the P3 protocol in an MM environment.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part of MIL-STD 2045-17502. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this part of MIL-STD 2045-17502 are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by DSPs to such documents is that they may be specific to a particular edition. Members of IEC and ISO maintain registers of currently valid International Standards and ISPs, and CCITT maintains published editions of its current Recommendations.

Amendments and corrigenda to the base standards referenced are listed in annex B.

NOTE - References in the body of this part of MIL-STD 2045-17502 to specific clauses of ISO/IEC documents shall be considered to refer also to the corresponding clauses of the equivalent CCITT Recommendations (as noted below) unless otherwise stated.

Government Documents:

MIL-HDBK 829, Volumes 1 , *MIL-STD 2045 Series Documentation, 23 April 1993*

MIL-HDBK 829, Volumes 2 , *Guidelines for Data Communications Protocol Standards (DCPS) DoD Standardized Profiles (DSPs), 23 April 1993*

MIL-STD 2045-17501: *1993, Information technology - DoD Standardized Profiles - Message Handling Systems - Common DoD Messaging.*

ACP 123: Common Messaging Strategy and Procedures, June, 1993

DoD activities may obtain copies of DoD directives through their own publication channels or from the DoD Single Stock Point, Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Other federal agencies and the public may purchase copies from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

International Standards Organization (ISO)

ISO/IEC TR 10000-1: 1990, *Information technology - Framework and taxonomy of International Standardized Profiles -Part 1: Framework.*

ISO/IEC TR 10000-2: 1990, *Information technology - Framework and taxonomy of International Standardized Profiles -Part 2: Taxonomy.*

ISO/IEC 10021-1: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 1: Service Overview. [see also CCITT Recommendation X.400(1988)]*

ISO/IEC 10021-2: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 2: Overall Architecture. [see also CCITT Recommendation X.402(1988)]*

ISO/IEC 10021-4: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 4: Message Transfer System: Abstract Service Definition and Procedures. [see also CCITT Recommendation X.411(1988)]*

ISO/IEC 10021-6: 1990, *Information technology - Text Communication - Message-Oriented Text Interchange Systems (MOTIS) - Part 6: Protocol Specifications. [see also CCITT Recommendation X.419(1988)]*

CCITT Recommendation X.400(1988), *Message handling system and service overview.*

CCITT Recommendation X.402(1988), *Message handling systems: Overall architecture.*

CCITT Recommendation X.411(1988), *Message handling systems: Message transfer system: Abstract service definition and procedures.*

CCITT Recommendation X.419(1988), *Message handling systems: Protocol specifications.*

MHS Implementors' Guide, Version 8, March 1992 (CCITT Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

(Application for copies of these documents should be addressed to the American National Standards Institute, 11 West 42nd Street, NY, NY 10036 or to ISO, Van Demonstrate 94, 1013 CN Amsterdam, Netherlands.)

3 Definitions

For the purposes of this part of MIL-STD 2045-17502, the following definitions apply.

Terms used in this part of MIL-STD 2045-17502 are defined in the referenced base standards. In addition, the following terms are defined.

3.1 General

MM base standards : the base standards referred to in this Military Messaging profile consist of both the X.400 base standards and ACP 123 which provides the definition of the MM content type.

Basic requirement : an Element of Service, protocol element, procedural element or other identifiable feature specified in the base standards which is required to be supported by all MHS implementations conforming to this DSP.

Functional group : a specification of one or more related Elements of Service, protocol elements, procedural elements or other identifiable features specified in the base standards which together support a significant optional area of MHS functionality.

NOTE - A functional group can cover any combination of MHS features specified in the base standards for which the effect of implementation can be determined at an external interface - i.e., via a communications protocol (other forms of exposed interface are outside the scope of this version of MIL-STD 2045-17502).

3.2 Support classification

To specify the support level of arguments, results and other protocol features for this part of MIL-STD 2045-17502, the following terminology is defined.

NOTE - Most classifications for the required support of arguments, results and other protocol features by an MTA are as specified in MIL-STD 2045-17501-4. Those classifications used by additional requirements in this part of MIL-STD 2045-17502 are repeated here for information.

In the case of protocol elements, the classification is relative to that of the containing element, if any. Where the constituent elements of a non-primitive element are not individually specified, then each shall be considered to have the classification of that element. Where the range of values to be supported for an element is not specified, then all values defined in the MM base standards shall be supported.

3.2.1 Static capability

To following classifications are used in this part of MIL-STD 2045-17502 to specify static conformance requirements - i.e., capability.

mandatory full support (**m**) : the element or feature shall be fully supported. An implementation shall be able to generate the element, and/or receive the element and perform all associated procedures (i.e., implying the ability to handle both the syntax and semantics of the element) as relevant, as specified in the MM base standards. Where support for origination (generation) and reception are not distinguished, then both capabilities shall be assumed.

out of scope (**i**) : the element is outside the scope of this part of MIL-STD 2045-17502 - i.e., it will not be the subject of a DSP conformance test.

4 Abbreviations

ACP	Allied Communication Publication
ACP127	ACP 127 Interworking
AMH	Application Message Handling
CCITT	Consultative Committee for International Telephone & Telegraph
DCPS	Data Communications Protocol Standards
DoD	Department of Defense
DSP	DoD Standardized Profile
DSPICS	DoD Standardized Profile Implementation Conformance Statement
DTMP	DCPS Technical Management Panel
EoS	Element of Service
FG	Functional group
ISO	International Standards Organization
ISO/IEC	ISO/International Electrotechnical Commission
ISP	International Standardized Profile
ITU	Inter-Telecommunication Union
JIEO	Joint Interoperability and Engineering Organization
MHS	Message Handling Systems
MM	Military Messaging (Message)
MOTIS	Message-Oriented Text Interchange Systems
MS	Message Store
MTS	Message Transfer System
OSI	Open Systems Interconnection
PICS	Protocol Implementation Conformance Statement
UA	User Agent

Support level for protocol elements and features (see 3.2):

m	mandatory full support
i	out of scope

5 Conformance

This part of MIL-STD 2045-17502 states requirements upon implementations to achieve interworking. A claim of conformance to this part of MIL-STD 2045-17502 is a claim that all requirements in the relevant base standards are satisfied, and that all requirements in the following clauses and in annex A of this part of MIL-STD 2045-17502 are satisfied. Annex A states the relationship between these requirements and those of the base standards.

5.1 Conformance statement

For each implementation claiming conformance to profile AMH23(D) as specified in this part of MIL-STD 2045-17502, a PICS shall be made available stating support or non-support of each option identified in this part of MIL-STD 2045-17502.

The scope of conformance to profile AMH23(D) covers both MTAs and MTS-users. A claim of conformance to profile AMH23(D) shall state whether an implementation claims conformance as an MTA, as a UA, or as an MS which is not co-located with an MTA.

A claim of conformance to profile AMH23(D) shall confirm that the implementation supports profile AMH12(D) as specified in MIL-STD 2045-17501-4.

5.2 MHS conformance

This part of MIL-STD 2045-17502 specifies implementation options or selections such that conformant implementations will satisfy the conformance requirements of ISO/IEC 10021 and the CCITT X.400 Recommendations.

Implementations conforming to profile AMH23(D) as specified in this part of MIL-STD 2045-17502 shall as a minimum conform to the basic requirements of profile AMH12(D), as specified in MIL-STD 2045-17501-4, as appropriate to the type of implementation (i.e. MTA or MTS-user) for which conformance is claimed.

Implementations conforming to profile AMH23(D) as specified in this part of MIL-STD 2045-17502 shall additionally implement all the mandatory support (m) features identified as basic requirements in annex A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in MIL-STD 2045-17502-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH23(D) as specified in this part of MIL-STD 2045-17502 shall state whether or not they support any of the optional functional groups as specified in MIL-STD 2045-17502-1 which are applicable to the scope of this profile. For each functional group for which support is claimed, an implementation shall additionally implement all the mandatory support (m) features identified for that functional group in annex A. They shall also support corresponding MHS Elements of Service and associated procedures as specified in MIL-STD 2045-17502-1, as appropriate to the scope of this profile.

Implementations conforming to profile AMH23(D) as specified in this part of MIL-STD 2045-17502 shall state the P3 application context(s) for which conformance is claimed.

5.3 Underlying layers conformance

Implementations conforming to profile AMH23(D) as specified in this part of MIL-STD 2045-17502 shall also conform to MIL-STD 2045-17501-2 in accordance with the P3 application context(s) for which conformance is claimed.

Annex A

(normative)

DSPICS Requirements List

for MIL-STD 2045-17502-4 (AMH23(D))

In the event of a discrepancy becoming apparent in the body of this part of 2045-17502 and the tables in this annex, this annex is to take precedence.

This annex specifies the support constraints and characteristics of MIL-STD 2045-17502-4 on what shall or may appear in the implementation columns of a DSPICS. Such requirements are additional to those specified in annex A of MIL-STD 2045-17501-4 (reference numbers correspond to items in that annex, or items in ISO/IEC 10611-4 Annex A, which is part of that DSP by indirect reference).

NOTE - this annex only specifies additional requirements for MTS-users. The support requirements for MTAs are as specified in annex A of MIL-STD 2045-17501-4.

Clause A.1 specifies the basic requirements for conformance to profile AMH23(D). Clause A.2 specifies additional requirements to those specified in A.1 for each of the optional functional groups if conformance to such a functional group is claimed.

In each table, the "Base" column reflects the level of support required for conformance to the base standard and the "Profile" column reflects the level of support required by this DSP. The "base standard" referred to is those aspects of X.400 required by the content type for Military Messaging (P772). The specification of levels of support in the "Profile" column uses the classification and notation defined in 3.2. The supplier of an implementation for which conformance to profile AMH23(D) is claimed should complete the Support column of the tables in annex A of MIL-STD 2045-17501-4 in accordance with the requirements contained therein together with any additional requirements in this annex for the type of implementation (i.e. MTA or MTS-user) in question.

A.1 Basic requirements

A.1.1 Type of implementation

No additional requirements.

A.1.2 Supported application contexts

No additional requirements.

A.1.3 Supported operations

A.1.2.2 Message Submission Service Element (MSSE)

Ref	Operation	MTS-user Profile	MTA Profile	Support	Notes/References
3	CancelDeferredDelivery	c[1]	m		see A.1.3.4

1 Mandatory if Deferred Delivery is supported, else optional.

A.1.4 Operation arguments/results

No additional requirements.

A.1.5 MessageSubmissionEnvelope

No additional requirements.

A.1.6 ProbeSubmissionEnvelope

Probes are dynamically prohibited in this profile as specified in this part of MIL-STD 2045-17502.

A.1.7 MessageDeliveryEnvelope

Ref	Element	Profile	Support	Notes/References
3.12.19	dl-expansion-history	m		

A.1.8 ReportDeliveryEnvelope

No additional requirements.

A.1.9 Common data types

Ref	Element	Profile	Support	Notes/References
5.3	alternate-recipient-allowed	m		

A.1.10 Extension data types

No additional requirements.

A.1.11 O/R names

No additional requirements.

A.2 Functional groups

A.2.1 Mandatory functional groups

There are no additional requirements for mandatory functional groups in this profile as specified in this part of MIL-STD 2045-17502 beyond the requirements specified in MIL-STD 1045-17501-4. There are no additional requirements to those specified for support of these functional groups.

A.2.2 Optional functional groups

There are no additional requirements on optional functional groups in this part of MIL-STD 2045-17502 to those specified in MIL-STD 2045-17501-4.

A.2.3 Prohibited functional groups

There are no additional prohibited functional groups in this part of MIL-STD 2045-17502 to those specified in MIL-STD 2045-17501-4.

Annex B

(normative)

Amendments and corrigenda

International Standards are subject to constant review and revision by the ISO/IEC Technical Committees concerned. The following amendments and corrigenda are approved by ISO/IEC JTC1 and are considered as normative references in this part of MIL-STD 2045-17502.

NOTE - Corresponding corrigenda to the equivalent CCITT Recommendations are contained in the joint CCITT/ISO MHS Implementor's Guide Version 8.

MOTIS

ISO/IEC 10021-1/Cor.1:1991

ISO/IEC 10021-1/Cor.2:1991

ISO/IEC 10021-1/Cor.3:1992

ISO/IEC 10021-1/Cor.4:1992

ISO/IEC 10021-2/Cor.1:1991

ISO/IEC 10021-2/Cor.2:1991

ISO/IEC 10021-2/Cor.3:1992

ISO/IEC 10021-2/Cor.4:1992

ISO/IEC 10021-4/Cor.1:1991

ISO/IEC 10021-4/Cor.2:1991

ISO/IEC 10021-4/Cor.3:1992

ISO/IEC 10021-4/Cor.4:1992

ISO/IEC 10021-6/Cor.1:1991

ISO/IEC 10021-6/Cor.2:1991

ISO/IEC 10021-6/Cor.3:1992

ISO/IEC 10021-6/Cor.4:1992

Annex C

(informative)

Specific DoD Requirements

C.1 Activities

Preparing Activity: Defense Information Systems Agency (DISA) - DC

Custodians:

DISA:	DC
Army:	SC
Air Force:	90
Navy:	OM
DIA:	DI
NSA:	NS
USMC:	MC
DLA:	DH
Other:	Joint Staff/Architecture & Integration USSPACECOM

Review Activity:

Army	- SC
Air Force	- 02, 13, 17, 29, 90
DLA	- DH
DMA	- MP
DIA	- DI
DOT	- OST
OASD	- IQ, DO, MA, IR
ODISC4 - AC	
STRICOM	- PT
NAVY	- EC, CH, ND, TD, OM
USMC	- MC, CG

Project: DCPS-0001, Subproject 02

C.2 Key Words

Allied Communication Publication (ACP)
DoD Standardized Profile (DSP)
Data Communications Protocol Standards (DCPS)
DCPS Technical Management Panel (DTMP)
DSPICS Proforma
International Standardized Profile (ISP)
Message Handling System (MHS)
Message Transfer Agent (MTA)
Message Transfer System (MTS)
Military Messaging (P772)
Open Systems Interconnection (OSI)
PICS Proforma